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1981 GORDON RESEARCH CONFERENCE ON MOLECULAR ENERGY TRANSFER (1981)
Brewster Academy, Wolfeboro, New Hampshire, June 29 - July 3

Chairman: Thomas F. George
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Final Conference Report

to the

Air Force Office of Scientific Research (AFSC), USAF

for

Grant No. AFOSR-81-0173

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The 1981 Gordon Research Conference on Molecular Energy Transfer brought together an international group of both experimentalists and theorists working in a wide variety of topics in the gaseous, liquid and solid phases. State-of-the-art techniques were presented and analyzed, and the Conference was beneficial to all participants.		

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Overview of Conference Activities

While the Principal Investigator is biased, in his opinion the 1981 Gordon Research Conference on Molecular Energy Transfer was one of the best scientific meetings which he has ever attended. The international mix of experimentalists and theorists working in a wide variety of topics in the gaseous, liquid and solid phases created an exciting environment for the exchange of ideas at the forefront of research in energy transfer. State-of-the-art techniques were presented and analyzed with regard to both basic and applied research. This Conference represents a wise investment of DoD funds.

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MATTHEW J. KERPER
Chief, Technical Information Division

Conference Program

The following two pages list the session topics in chronological order, the names of the Speakers and Discussion Leader for each session, and the titles of the talks presented by the Speakers.

1981 Gordon Research Conference on Molecular Energy Transfer

Brewster Academy, Wolfeboro, New Hampshire, USA

June 29 - July 3

Chairman: Thomas F. George

1. Reactions and Energy Transfer at Solid Surfaces, June 29, AM

Discussion Leader: Thomas F. George

Speakers: John C. Tully, "Chemical Dynamics at Solid Surfaces"

W. Henry Weinberg, "Catalytic Reactions Over Well-Characterized Metallic Surfaces"

Jimmie D. Doll, "Dynamics of Gas/Solid-Surface Processes"

2. Spectroscopy at Solid Surfaces, June 29, PM

Discussion Leader: Horia I. Metiu

Speakers: Ming C. Lin, "Kinetics and Dynamics of Hydroxyl Radical Desorption from a Platinum Catalyst Surface"

George C. Schatz, "Theories of Surface-Enhanced Raman Spectroscopy"

Jeffrey I. Steinfeld, "Reactions of Laser-Generated Free Radicals at Semi-Conductor Surfaces"

3. Intramolecular Energy Transfer, Radiationless Transitions and Unimolecular Reactions, June 30, AM

Discussion Leader: F. Fleming Crim

Speakers: Sighart F. Fischer, "Vibrational Lifetimes and Fermi Resonances in Polyatomic Molecules"

Stuart A. Rice, "Inter- and Intramolecular Energy Transfer"

Paul W. Brumer, "Classical and Quantum Intramolecular Dynamics in Small Molecules"

4. Reactions, Energy Transfer and Spectroscopy in Liquids, June 30, PM

Discussion Leader: Max Maier

Speakers: Steven A. Adelman, "New Principles in Condensed-Phase Chemistry with Applications"

Geraldine A. Kenney-Wallace, "Picosecond Perspectives on Spectroscopy and Reactions in Liquids"

Peter G. Wolynes, "Quantum Dynamics in Liquids"

5. Interaction of Intense Laser Radiation with Collision Dynamics,
July 1, AM

Discussion Leader: John C. Light

Speakers: Michael G. Raymer, "The Spectrum of Light Scattered by
Atomic Vapors: Collisional Redistribution
and Saturation"

Frederick H. Mies, "Quantum Theory of Atomic Collisions
in Intense Laser Fields"

6. Electronic Energy Transfer in Gases, July 1, AM & July 2, AM

Discussion Leader: Paul L. Houston

Speakers: William H. Miller, "To What Extent Can Current Theoretical
Models Accurately Describe the Dynamics
of Electronic Energy Transfer in
Molecular Gases?"

William H. Breckenridge, "Energy Transfer Exit Channels in
the Collisional Quenching of
Electronically Excited Metal Atoms"

7. Vibrational and Rotational Energy Transfer in Gases, July 2, AM

Discussion Leader: David A. Micha

Speakers: Anthony J. McCaffery, "Reorientation by Elastic and
Rotationally Inelastic Collisions"

Joel M. Bowman, "Classical-Limit Sudden Approximation
Analyses of Rotational Rainbows"

8. Chemical Reactions of Excited Gas-Phase Species, July 2, PM & July 3,

Discussion Leader: William C. Stwalley

Speakers: John C. Polanyi, "Dynamics of Nonadiabatic Reactions"

Michael Baer, "Quantum Mechanical Analysis of Electronically
Nonadiabatic Chemical Reactions"

9. Multiphoton Excitation of Gas-Phase Molecules, July 3, AM

Discussion Leader: Richard B. Hall

Speakers: Richard B. Bernstein, "Multiphoton Excitation, Ionization
and Fragmentation of Gaseous Molecules"

Robert E. Wyatt, "Computational Studies of Multiphoton
Excitation in Model Systems and in
Small Molecules"

(July 1, PM is a poster session)

Conference Attendees

The following six pages list the names and addresses of the attendees. The word/number pair appearing after each name is the local address at Brewster Academy, e.g., Kimball 1.

GORDON RESEARCH CONFERENCES

MOLECULAR ENERGY TRANSFER

June 29-July 3, 1981
Brewster Academy, Wolfeboro, NH

Thomas F. George, Chairman

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